Subject: Re: What is the difference between learning U++ and Learning C++ through Microsoft Visual Studio?
Posted by mr_ped on Sat, 08 Jun 2019 08:24:41 GMT
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RaySynthesyzer wrote on Sat, 08 June 2019 07:44Dear Novo and Xemuth,

So, will I be able to find the libraries, and support, that I would need to develop somewhat complicated mathematical algorithms if I use U++? if not will I need to develop them myself? Sounds difficult to me. Also, given the fact that I don't have any experience in C/C++ yet, I am worried that if I have doubts in programming using U++, I will be pretty much stranded.

When writing application in "U++", you are writing in regular C++ language, i.e. theoretically you can use any other C++ library/API/tools together (but...).

U++ is platform/GUI/core/... framework, i.e. set of many helpful utilities and libraries (for C++). But it's so much of them, that the "but" part is, that default U++ project does use even the U++ memory allocator or it's own implementation of String class, etc.. Which may cause some conflicts or difficulties when you would try to use other complex C++ library or just DLL file in windows. If you are experienced C++ programmer, you can deal with these issues (the U++ libraries can be reconfigured a lot, to avoid some conflicts, like you can switch back to standard memory allocator, etc.), but if you are new to both C++ and U++, it may be too much. Then again if you are new to C++, it may be even too much to create some GUI application quickly, C++ without framework is actually not very good fit for that. Then starting with U++ may get you productive much quicker, for the price of being a bit more locked to it, until you learn also lot of deep details of C++ and how U++ is written.

So it depends a lot, what kind of other libraries you want to use. If they are C++ libraries focused on calculations (like matrix math, CFD simulation, etc) and distributed as source code, it will very likely fit together with U++ nicely or with just some minor extra configuration (that's ideal case for U++ usage). If it's for example something like windows-GUI specific extension or DLL files, or just binary closed source libraries, it may be more tricky, and you will lose the cross-platform aspect any way.

Also while the language is regular C++, U++ provides own alternatives to almost everything in the STL (Standard Template Library), which renders many C++ tutorials less usable (as C++ is usually shown together with STL, because bare C++ is sort of difficult to showcase). But most of the U++ alternatives are really similar to STL in their principle, just the naming of API is somewhat different, etc, so I wouldn't be that much afraid of U++. Still learning also a bit of standard C++ and STL helps, to make you better recognize where you are using U++ framework.

Quote:In this project, as far as I've been told the end product needs to be a GUI type .exe file that the customer should be able to use. Based on your responses, I believe that later part of the project will be easier using U++.

Doing *some* GUI "exe" in U++ can be really a very rapid process, if you know U++ well, you can be probably as productive as in many script languages or web development. It will take a bit more effort to polish the GUI to certain design (if you have very precise idea how the GUI should look

and the default look is not good enough), then again it's C++, so if you spend enough effort, you can create pretty much anything what the target platform is capable of (while things written in HTML+CSS may be faster to get some particular design, but you may hit limits of web browser functionality and not being capable to implement some functionality without extending the browser itself).

You should try to install U++ and go through the GUI examples, check their source and the result, maybe you will like it instantly, to me it feels as quite good design of framework.

Quote:Is it possible for doing something like developing the back-end / algorithm in another software, and then using U++ to make the GUI? if it possible, what are some of the popular open source softwares (popular in terms of having open source libraries) that can be used for this purpose?

Again, it's C++, so the question is not if you can (of course you can), but how difficult it is.

Quote:Also, I am curious as to why a software that seems to be so handy isn't popular or at least well known.

Marketing? Obscurity? And U++ is mostly work of 2-3 authors, although being developed and improved over decade, so while it covers many common problems of app development, it isn't as huge as for example Qt5 (which is being developed by tens of core paid developers with help of hundreds of community devs). It also means U++ doesn't take hours to build from sources and you can actually check the sources yourself (in a meaningful way, you can also check Q5 framework sources, but it's many more source code lines and lot more complex project, so it takes more time to decipher Qt5 internals in case you are looking for some framework bug, than U++ internals).

Quote:I would really appreciate some advise on these matters. Thanks a lot again, your replies were really helpful.

If you are also new to C++, this may be more difficult, than usage of U++. C++ is sort of demanding programming language, it takes some time and experience (usually couple of years) before you will write your first code which is reasonably correct and complex. Most of the programmers in their early years of C++ write lot of useless or even plain wrong stuff, which works mostly by accident, because they don't understand well computers and C++ is quite low level language. In this regard, if you will stick to U++ tutorials and get the feel for U++ style of coding, it may actually give you huge jumpstart into C++ programming world, avoiding lot of inferior quality tutorials where even the author of tutorial doesn't know what he is doing...